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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,027	02/19/2002	Gennady Ruderman	V0077/7223	6406
7590 Gary L. Loser, Esq. Vice President and General Counsel Varian Semiconductor Equipment Associates, Inc. 35 Dory Road Gloucester, MA 01930			EXAMINER PATEL, VISHAL A	
			ART UNIT 3676	PAPER NUMBER
			MAIL DATE 10/23/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/079,027	Applicant(s) RUDERMAN, GENNADY	
	Examiner Vishal Patel	Art Unit 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-32 and 35 is/are pending in the application.
- 4a) Of the above claim(s) 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7 and 9-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Hubler (US No. 3,666,276).

Hubler discloses a sealing device comprising a shaft seal (5a) having a sealing portion and a support portion (FIG. 2). The sealing portion is constructed and arranged to sealingly engage with a shaft and allow the shaft to be at least one of slidingly and rotationally moved relative to the sealing portion (FIG. 2). There is a seal mount (22) having a first end (12), a second end (13) and a flexible member (6a) between the first (12) and second ends (13) that enable movement of the first end relative to the second end in at least one degree of freedom (via flexible connecting bellows portion). The first end (12) is sealingly engageable to at least a portion of the support portion (3a) of the shaft seal (5a). The second end (13) is sealingly engageable to an engagement surface (surface of 2a) about a port into a process chamber (FIG. 2).

B. The flexible member defines a transition space in a first zone P1, which is in fluid communication with the vacuum process chamber (defined by the interior of 2a). The pod comprises a central axis and the flexible member (6a) allows Movement of the shaft (1a) seal in at least two degrees of freedom relative to the central axis of the port (FIG. 2). The pod has a pod size (13) substantially larger than the shaft size (outer diameter of 1a), which extends through the

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port (FIG. 2). The shaft may be angularly or laterally off set with respect to a central axis of the seal device via its flexible bellows. The sealing portion of the shaft seal sealingly engages with a cylindrical-shaped portion of the shaft. The support portion of the shaft (1a) is substantially rigid and constructed of metal or PTFE (Col. 2, line 31). The flexible member may be rubber or an elastomer. The flexible member includes a plurality of undulations forming a bellows portion (FIG. 2). There is a first retaining ring constructed and arranged to sealingly engage a first end of the flexible member to the shaft. An o-ring is positioned between the first retaining ring and the shaft seal. There is a second retaining ring (13) constructed and arranged to sealingly engage a second end of the flexible member to an engagement surface of the process chamber (interior of 2a). There is a second o-ring positioned between the second retaining ring (13) and the engagement surface (2a). The flexible member (6a) includes a flexible collar portion connecting the bellows and 13. The device is fluidly connectable to a vacuum source (Col. 4, line 41). Hubler teaches that the shaft is extended through an opening through a chamber (chamber formed by 2a and opening through 2a). The sealing portion is disposed on the shaft and is configured to maintain a vacuum seal and to resist fluid flow between the sealing portion and the shaft (this is the case since the sealing portion 5a reduces the gap and would provide a narrow clearance that would resist fluid flow).

The fact that the seal arrangement may be used with a shaft in a vacuum environment is given very little patentable weight because this limitation is considered to be intended use limitation. The fact that the shaft maybe controlled by an external controller is considered to be intended use limitation and given very little patentable weight.

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Furthermore Hubler does teach that a vacuum exists in area with pressure P1, the seal integrity is maintained and the shaft is capable of being movable by an external controller. The sealing device is capable of being configured to maintain a vacuum seal about the shaft and resist fluid flow between the sealing portion and the shaft, since pressure in P1 is not able to communicate or flow into pressure P2.

*Response to Arguments*

3. Applicant's arguments filed 8/3/07 have been fully considered but they are not persuasive.

4. In response to applicant's argument that "being configured...the shaft" in lines 9-10 of claim 1 and lines 12-13 in claim 27, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Applicants' argument with regard to Hubler is not persuasive because without the sealing portion 5a the gap between the member 3a and shaft would be larger and would provide a leakage path and by providing a sealing portion 5a on the shaft the gap is narrowed and would resist fluid flow. Furthermore applicant has not claimed to eliminate or stop fluid flow just resist fluid flow which is done by Hubler. Furthermore the limitations "being...shaft" is considered to be intended use and given little patentable weight in an apparatus claim.

Furthermore as pointed out in the rejection that the claims are directed to a sealing device, a floating shaft seal and a device for maintaining a seal and not to an ion process chamber or a vacuum process chamber as argued by applicant.

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Applicants' argument that the invention of Hubler is adapted to leak is correct but is adapted to leak only one fluid while maintaining a seal for the other fluid (column 3, lines 25-30). For example: to seal an environment with hazardous material (pressure in P2) one would leak fluid from P1 to the environment (column 3, lines 24-26). For example to seal an environment with hazardous material in P1 one would leak fluid from P2 into the environment (column 3, lines 26-28).

### *Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP  
October 19, 2007

A handwritten signature in black ink, appearing to read 'Vishal Patel', with a stylized flourish at the end.

Vishal Patel  
Patent Examiner  
Tech. Center 3600